

WHAT IS CLAIMED IS:

1. A method for identifying a substance capable of affecting a viral infection, comprising:

providing a lipid globule targeting sequence, as a first component;

providing a lipid globule, as a second component;

contacting the two components with a substance to be tested under conditions that would permit the two components to interact in the absence of the substance; and

determining whether the substance disrupts the interaction between the first and second components.

2. The method of claim 1, wherein the targeting sequence comprises a hepatitis C virus (HCV) core protein or a fragment thereof, or a GB virus-B core protein or a fragment thereof.

3. The method of claim 2, wherein the targeting sequence further comprises variants or homologues of the hepatitis C virus (HCV) core protein or the GB virus-B core protein.

4. The method according to claim 1, wherein the substance to be tested is administered to a cell, the lipid globule targeting sequence is expressed in said cell and the lipid globule is a natural constituent of said cell.

5. The method according to claim 4, wherein the lipid globule targeting sequence is naturally or recombinantly expressed in said cell.

6. The method according to claim 1, further comprising:  
administering a virus to a cell in the absence of said substance which has been determined to disrupt the interaction between the first and second components;  
administering the virus to the cell in the presence of said substance; and  
determining if said substance reduces or abolishes the susceptibility of the cell to viral infection or the effects of viral infection.

7. The method according to claim 1, wherein the lipid globule targeting sequence comprises amino acids of the HCV core protein selected from the group consisting of 125 to 144, 161 to 166 and the combination thereof.

8. The method according to claim 1, wherein the viral infection is a hepatitis infection or other viral infection of the human or animal liver.

9. The method according to claim 4, wherein said cell is a liver cell.

10. The substance identified by the method of claim 1.

11. The substance according to claim 10, wherein said substance has not previously been known to affect viral infection.

12. A method for identifying a substance for treating or preventing a viral infection, comprising:

administering said substance to a mammalian cell; and

identifying whether the administration of said substance upregulates expression of adipocyte-specific differentiation related protein (ADRP) in the mammalian cell.

13. A substance capable of disrupting an interaction between a lipid globule targeting sequence and a lipid globule for use in affecting a viral infection, wherein the targeting sequence comprises a hepatitis C virus (HCV) core protein or a fragment thereof, or a GB virus-B core protein or fragment thereof.

14. A polypeptide comprising a lipid globule targeting sequence for use in preventing or treating a viral infection, wherein the targeting sequence comprises an HCV core protein or a fragment, variant or homologue thereof, or a GB virus-B core protein or a fragment, variant or homologue thereof.

15. The polypeptide according to claim 14, wherein the targeting sequence comprises amino acids of the HCV core protein selected from the group consisting of 125 to 144, 161 to 166 and the combination thereof.

16. A pharmaceutical composition comprising the polypeptide according to claim 15 and a pharmaceutically acceptable carrier or diluent.

17. A method for treating or preventing a viral infection comprising administering an effective amount of the pharmaceutical composition of claim 16.

18. A method for treating or preventing a viral infection comprising administering an effective amount of a pharmaceutical composition comprising the substance identified by claim 1 and a pharmaceutically acceptable carrier or diluent.

19. A method for treating or preventing a viral infection comprising administering an effective amount of a pharmaceutical composition comprising the substance identified by claim 12 and a pharmaceutically acceptable carrier or diluent.

20. A polynucleotide encoding a polypeptide according to claim 14 for use in treating or preventing a viral infection.

21. A method for determining whether a test substance is capable of treating or preventing a viral infection, comprising:

providing a lipid globule targeting sequence, as a first component, said targeting sequence comprising a hepatitis C virus (HCV) core protein or a fragment thereof, or a GB virus-B core protein or fragment thereof;

providing a lipid globule, as a second component;

incubating the first and second components with the test substance under conditions that would permit the first and second components to interact with one another in the absence of the test substance; and

determining whether the test substance disrupts the interaction between the first and second components.